

Family Planning in China: Out of Control?

ABSTRACT

Objectives. This study examined sex ratios in 6 counties in China.

Methods. Data from a household survey ($n = 5756$) were retrospectively analyzed.

Results. A normal sex ratio was found for children less than 18 years of age. Significant differences in sex ratios and family size were observed between the household survey data and population registers.

Conclusions. The findings indicate a high number of unregistered female births and are consistent with calls for a rethinking of Chinese population policies in the direction of a more collaborative policy based on female education and participation. (*Am J Public Health*. 1998;88:649-651)

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Introduction

It is generally believed that sex ratios in China, as an effect of the 1-child policy, reflect an abnormally high ratio of boys to girls, and this belief is supported by official demographic statistics. The 1-child policy has, from the outset, been contentious, although it has been praised by the United Nations as an effective and successful family planning program. Qian Xinzong, chairman of the China Family Planning Commission, was awarded the first United Nations Population Prize in the early 1980s.¹

Sen² criticized the "override" approach of China's 1-child policy, noting evidence of neglect of female children, sex-selective abortions, and even female infanticide as a result of coercive policies. Sen's conclusion was that voluntary and collaborative strategies building on female education and access to health care are better means of achieving demographic goals.

Methods

The findings presented here are based on data from a household survey ($n = 5756$) conducted in 6 counties. Data were collected in a collaborative research project involving Karolinska Institutet (Stockholm) and the School of Public Health of Shanghai Medical University.

The households were selected via 4-stage sampling. The household survey was conducted in autumn 1995. The questionnaire covered 192 variables, including age, sex, and relationship to head of household of all household members, and women 15 to 49 years of age were asked about their pregnancy histories and antenatal, delivery, and postnatal service use. The response rate was nearly 100%. Interviewees, although informed of their right to say no, may have felt obliged to participate. Quality controllers in each county reinterviewed 5% of the sample.

Results

A surprising finding was that the average sex ratio for children in the household less than 18 years of age was 105.5:100 (i.e. within the range of the normal sex ratio at birth) (Table 1).

Significant variation (chi-square test, $P < .001$) was observed between the counties; the highest sex ratio was recorded in Yugan County (156:100), and the lowest was recorded in Jintan County (68:100). Excluding these 2 extreme observations, the sex ratio in the remaining 4 counties was 103.5:100.

After the 1-child policy took effect, the reported sex ratio for live births in China increased from 107.4:100 in 1980 to 111:100 in 1987.³ For higher parity births, even higher sex ratios have been noted, in the range of 115:100 to 118:100. Johansson and Nygren found that the sex ratio was clearly higher for children born outside the 1-child plan (parity above 1).³

The household sex ratios deviated significantly from official register data for the total county populations. In all counties except Yugan, household interviews yielded a lower sex ratio than register data. In 3 of the 6 counties, there were more females than males, although register data recorded more males than females in all 6. Average household size was found to be larger in 5 counties as well (Figure 1).

Interestingly, the number of girls found at home in the household survey was also significantly higher than the number reported by the mothers in pregnancy histories (chi-square test, $P < .02$) for all counties except Yugan. If Yugan is excluded (assuming that recording was biased), the number of girls living at home exceeded the number in pregnancy histories by more than 22%. Importantly, no significant difference was found for boys.

Discussion

The 1-child policy was launched in 1979. It is often assumed that male preference has been reinforced by this policy, as evidenced by a widening imbalance in sex ratios. In May 1989, the Ministry of Health issued an urgent notice strictly forbidding

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TABLE 1—Sex Ratio in 6 Counties in China, Boys and Girls Less Than 18 Years of Age, Determined through a Household Survey

	Province						Total n = 1605
	Anhui n = 574		Jiangxi n = 644		Jiangsu n = 387		
	Tongling n = 283	Fanchang n = 291	Yugan n = 228	Duchang n = 416	Jurong n = 201	Jintan n = 186	
Boys under the age of 18 years, %	47.0	57.0	61.0	47.8	55.7	40.3	51.3
Girls under the age of 18 years, %	53.0	43.0	39.0	52.2	44.3	59.7	48.7
Sex ratio ^a	0.89	1.33	1.56	0.92	1.26	0.68	1055

^aChi-square $P < .001$ for variations in sex ratios between counties.

the use of medical technology to perform prenatal sex determination. Westley has suggested that future Chinese sex ratios will approximate those of the most advanced regions, Shanghai and Beijing (i.e. the overall trend in China will eventually develop toward lower fertility and lower sex ratios).⁴

The results of this study demonstrate that, in the 6 study counties, the 1-child policy has not resulted in higher sex ratios (contrary to official statistics).

In 5 of the 6 study counties, families were larger and the true number of girls was significantly higher than shown in official registers, indicating consistent underreporting of female births. The significant differences between girls found at home and reported in pregnancy histories confirm that respondents also excluded a high number of

female births in their pregnancy histories.

Why did the respondents not answer truthfully? Probably some respondents participated only reluctantly. The interviewers could have been perceived as officials and may indeed have been accompanied by local officials.

In addition, sanctions for noncompliance with family planning are severe and affect both families and local officials. Families can lose land plots, be disqualified for loans, or suffer financial penalties.⁵

Clearly, the data set was limited. The extremely low sex ratio in Jintan County is puzzling. For one county, Yugan, underreporting of girls was not indicated. Discussions with local officials, however, clearly indicated the existence of unregistered girls in this county as well.

Male preference is often attributed to

traditional Chinese culture. Interviews with women in a rural and remote part of China, however, showed that the majority wanted to have 1 son and 1 daughter. Less than 4% of women preferred to have 1 or 2 sons only.

Local officials ensure that unregistered children have access to health and education, but for higher fees. This applies to immunization as well, which is ominous considering declining coverage and outbreaks of infectious diseases.⁷

A recent survey conducted by the State Statistical Bureau reported that 30 million Chinese children have never been to school or have dropped out. One third of the world's children who do not receive an education are Chinese.⁸ If school and health care fees are higher for unregistered children, this will no doubt lead to higher rates of service exclusion, with a strong bias

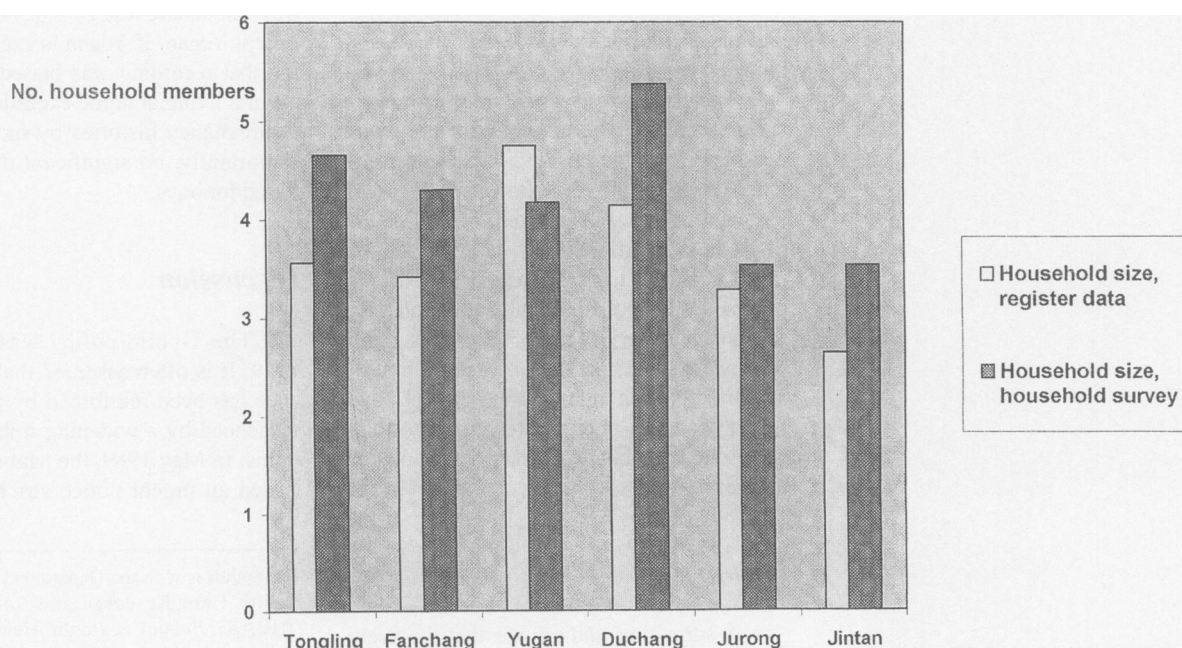


FIGURE 1—Average number of household members in 6 counties in China, household survey (n = 5756) and official (police) population register data (1995)

against rural girls.

Perhaps the practice of family planning in rural China is not quite as "overriding," coercive, or successful as commonly held. However, the long-term consequences of a large and growing population of unregistered, uneducated females with unattended health problems will no doubt prove counterproductive to population objectives. □

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Infant Mortality Differences between Whites and African Americans: The Effect of Maternal Education

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ABSTRACT

Objectives. Despite decreasing infant mortality in North Carolina, the gap between African Americans and Whites persists. This study examined how racial differences in infant mortality vary by maternal education.

Methods. Data came from Linked Birth and Infant Death files for 1988 through 1993. Multiple logistic regression models adjusted for confounders.

Results. Infant mortality risk ratios comparing African Americans and Whites increased with higher levels of maternal education. Education beyond high school reduced risk of infant mortality by 20% among Whites but had little effect among African Americans.

Conclusions. Higher education magnifies racial differences in infant mortality on a multiplicative scale. Possible reasons include greater stress, fewer economic resources, and poorer quality of prenatal care among African Americans. (*Am J Public Health*. 1998;88:651–656)

Introduction

Infant mortality is on a steady decline both in the United States as a whole and in North Carolina^{2–4} (see Figure 1). Nevertheless, in 1992 North Carolina had the seventh highest rate of infant mortality in the United States.^{5,6} Moreover, 22 industrialized nations had lower infant mortality rates than the United States in 1988, compared with 11 in 1960.^{1,7}

Disparities in infant survival across ethnic groups, educational levels, and health care settings have persisted.^{1–10} The disparity in infant death rates between African Americans and Whites has hovered at about twofold since 1950 (see Figure 1).^{5–9} Recent reports of national data showed an increasing gap in infant mortality between African-American and White babies with increasing maternal educational attainment.⁹ However, this analysis did not control for potential confounders.

We therefore examined the joint effect of maternal race and education on infant mortality in North Carolina, adjusting for factors such as maternal age, smoking, parity, prenatal care, gestational age, and residence.

Methods

The North Carolina Linked Birth and Infant Death File, containing births in years 1988 through 1993 and all infant deaths from this cohort, was obtained. We com-

pared mothers who reported their race as Black (hereafter designated "African Americans") with those who reported their race as White. Foreign-born mothers, who represented 3.3% of the study population, were assigned to the appropriate racial group. The 2.6% of the cohort who were neither African-American nor White were excluded, leaving 595 645 births. Infant death in the first year was the outcome.

Because African Americans have shorter gestations and lower-birthweight babies than Whites, and because these factors are strong determinants of infant mortality, many researchers adjust for length of gestation or birthweight. Given that birthweight is largely a function of gestational age at birth, the latter was used. On the other hand, preterm delivery or low birthweight could be on the causal pathway, in which case adjustment introduces bias.¹¹ We present results with and without adjustment for gestational age.

In our study, gestational age (derived by subtracting the date of the mother's last normal menstrual period from the delivery date) was missing for 19% (n = 113 094) of

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